Draft
Environmental Assessment

LEWIS and CLARK CAVERNS STATE PARK
Aerial Weed Spraying Project

January 2007

Montana Fish, Wildlife & Parks

Lewis and Clark Caverns State Park Aerial Weed Spraying Project
Draft Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of proposed state action**: Montana Fish, Wildlife & Parks (FWP) proposes to cooperate in the Lower Jefferson River Valley Cooperative Weed Project by developing an on-going aerial herbicide spraying program to contain and control noxious weeds within Lewis and Clark Caverns State Park.

2. **Agency authority for the proposed action:** The 1939 Montana State Legislature passed MCA 23-1-101, which states that a State Park System would be established "for the purpose of conserving the scenic, historic, archaeological, scientific, and recreational resources of the state and providing for their use and enjoyment, thereby contributing to the cultural, recreational, and economic life of the people and their health". Montana statute 23-1-102 (4) gives FWP "jurisdiction, custody, and control of all state parks, recreational areas, public camping grounds, historical sites, and monuments".

   In addition, MCA 23-1-126 states that (1) "The good neighbor policy of public land use, as applied to public recreational lands, seeks a goal of no impact upon adjoining recreational lands by preventing impact on those adjoining lands from noxious weeds, trespass, litter, noise and light pollution, stream-bank erosion, and loss of privacy."

3. **Name of project:** Lewis and Clark Caverns State Park Aerial Weed Spraying Project

4. **Name, address and phone number of project sponsor (if other than the agency):** Montana Fish, Wildlife, & Parks is the project sponsor**.**

5. **Project Timeline:**
   Estimated Commencement Date: Summer 2007
   Estimated Completion Date: NA
   Current Status of Project Design (% complete): 50

6. **Location affected by proposed action (county, range and township:**
   Lewis and Clark Caverns State Park is located in Jefferson County in T01N, R02W, sections 16, 17, and 18.

Figure 1. Area map of Lewis and Clark Caverns State Park.

7. Project size -- estimate the number of acres that would be directly affected that are currently: (Inconsistent font size)

	Acres		Acres
(a) Developed:		(d) Floodplain	0
Residential	0		
Industrial	0	(e) Productive:	
		Irrigated cropland	0
(b) Open Space/Woodlands/Recreation	100	Dry cropland	0
		Forestry	0
(c) Wetlands/Riparian Areas	0	Rangeland	0
		Other	0

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits: permits will be filed at least 2 weeks prior to project start.

Agency Name	Permit
N/A	

(b) Funding:

Agency Name	Funding Amount
Montana Fish, Wildlife & Parks	$3,000/yr

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
Jefferson County Weed District	Oversight
Lower Jefferson Valley Cooperative Weed Control Project	Oversight

8. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

Lewis and Clark Caverns State Park is located in southwest Montana in Jefferson County (see figures 1 & 3), within FWP Region 3. Lewis and Clark Caverns was Montana's first state park and continues to be a very popular destination, attracting over 70,000 visitors a year, mostly in the summer months. Visitors climb a winding access road to nearly 5000 ft, which gives spectacular views of the Lower Jefferson River Valley and the primitive sections of the park (see Figure 2). The main attraction of the park is a two-hour guided cave tour within the caverns themselves, where visitors can observe natural cave formations such as stalactites, stalagmites, columns, and helicitites, learn about cave ecology, and hear about the history of the Lewis and Clark Expedition and other early exploration. The park also offers a visitor center, an amphitheater, several picnic areas, a large campground, showers, RV dump facilities, tipi, three rental cabins, and several miles of hiking trails. Many visitors use the park as a base while exploring the Lower Jefferson River Valley.

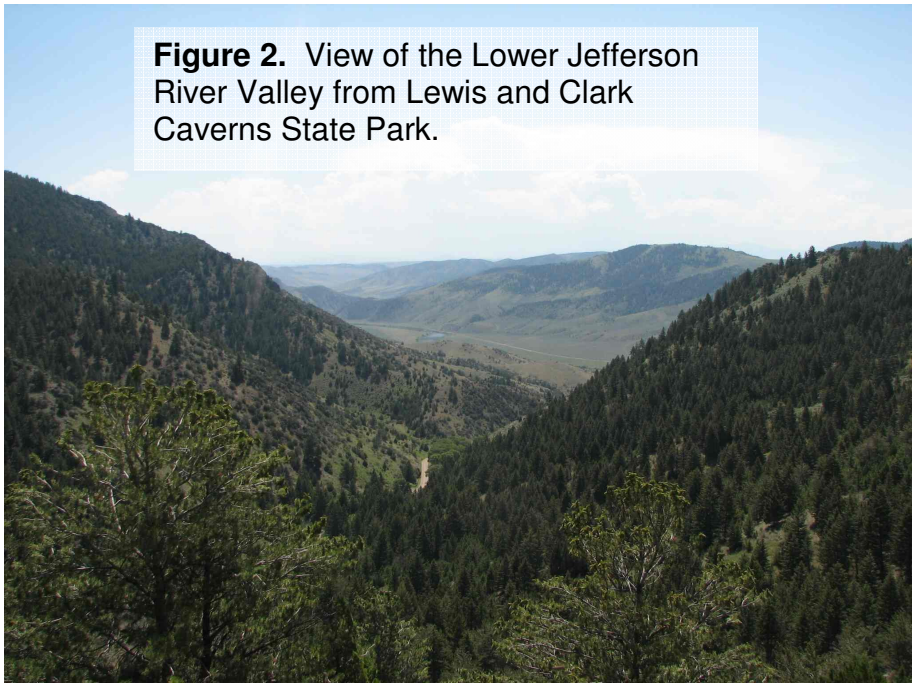


Figure 2. View of the Lower Jefferson River Valley from Lewis and Clark Caverns State Park.

Lewis and Clark Caverns State Park encompasses 2920 acres. Most of the Park's amenities such as the visitor's center, campgrounds, picnic areas, etc. are concentrated in the eastern third of the park (see Figures 3 and 4). The remainder of the park is largely undeveloped except for a few hiking trails, and the terrain is often rough and steep. These hills also harbor a number of plant and animal species, including a rare plant association of curl-leaf mountain mahogany - bluebunch wheatgrass (*Cercocarpus ledifolius - Agropyron spicatum*). This undisturbed vegetation association is a potential ecological natural landmark within the northern Rockies. This ruggedness has helped preserve the primitive aspect of the Park, but it has also been a hindrance to maintenance efforts, especially in regards to noxious weed management.

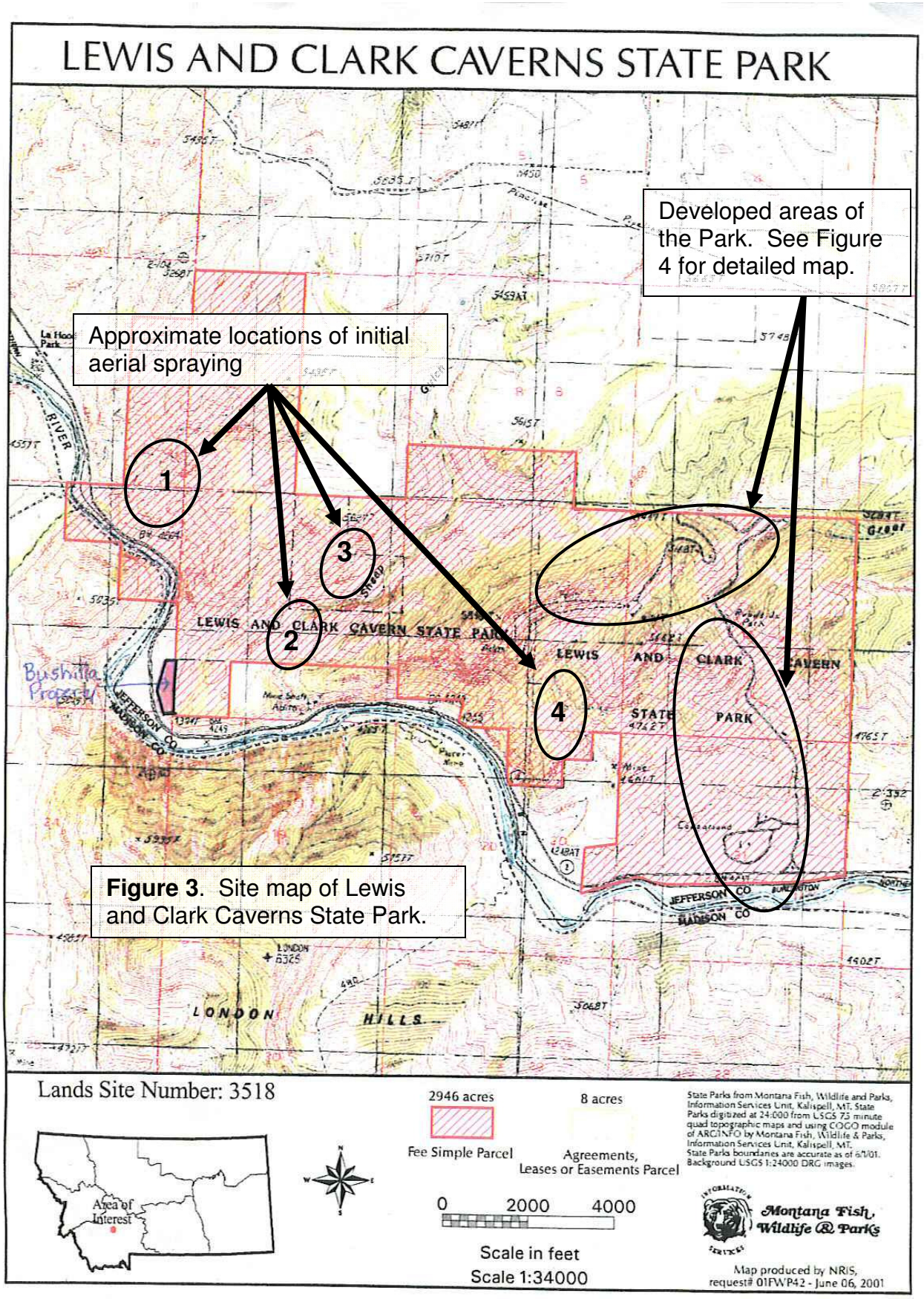
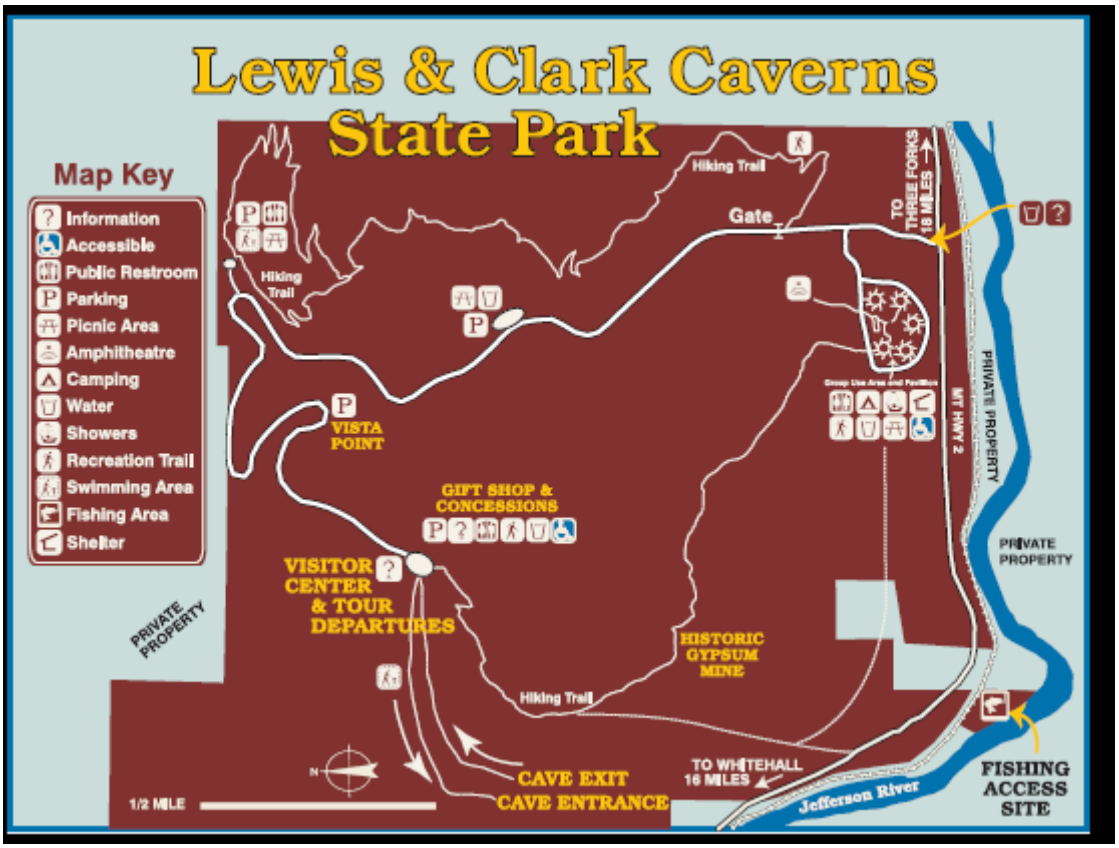


Figure 3. Site map of Lewis and Clark Caverns State Park.

Figure 4. Map of roads and amenities at Lewis and Clark Caverns State Park. Notice the change in map orientation.



The entire lower Jefferson River valley area is experiencing a serious invasion of noxious weeds, including the lands in Lewis and Clark Caverns State Park. Leafy spurge (*Euphorbia esula)* has been noted as a problem in the area since the early 1980's, with spotted knapweed *(Centaurea maculosa)* becoming noticeably problematic about a decade later. Hounds-tongue (*Cynoglossum officinale*) has only recently become a problem, and Dalmatian toadflax (*Linaria dalmatica)* and common tansy *(Tanacetum vulgare)* are becoming established but are currently isolated and not yet widespread in the area. Hounds-tongue and spotted knapweed are the most prevalent noxious weeds in the park, followed by leafy spurge, Canada thistle (*Cirsium arvense)*, common tansy, and Dalmatian toadflax.

Hounds-tongue (Figure 5) is a Eurasian biennial weed that was introduced into North America as a contaminant of cereal seed in the late 1800's. It is a serious problem on rangeland and pasture. The weed is invasive and significantly reduces forage for cattle, horses, and wildlife. In addition, the barbed seeds, or burrs, of the plant readily adhere to hair, wool, and fur of animals, which cause irritation, discomfort, and reduces the value of domestic sheep wool. Even more important, hounds-tongue contains large quantities of pyrrolizidine alkaloids, which are toxic to wild and domestic grazing animals. The leaves also produce a disagreeable odor.

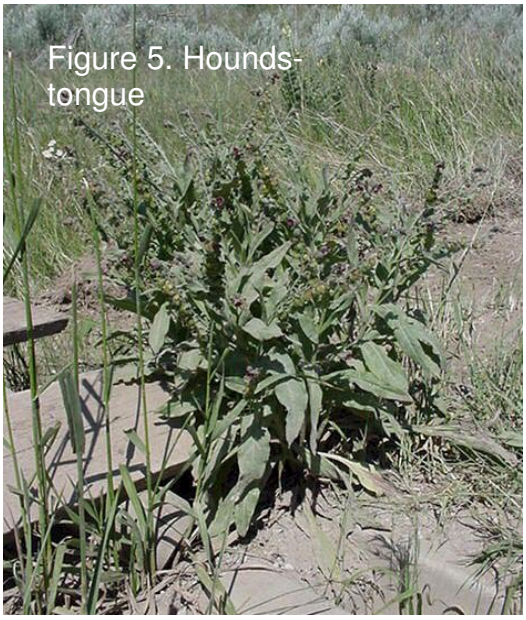


Figure 5. Hounds-tongue


Figure 6. Spotted Knapweed

Spotted knapweed (Figure 6) is an aggressive, introduced weed species that rapidly invades pasture, rangeland and fallow land and causes a serious reduction in forage and crop production. The weed is a prolific seed producer with 1000 or more seeds per plant. Seed remains viable in the soil five years or more, so infestations may re-occur a number of years after vegetative plants have been eliminated. Spotted knapweed has few natural enemies and is consumed by livestock and game only when other vegetation is unavailable. The plant releases a toxin that inhibits growth of other plant species.

Landowners in the area have been actively trying to control noxious weeds on their lands for many years, with limited success. In 2004 landowners and producers unified their efforts and began the Lower Jefferson Valley Cooperative Weed Control Project (LJVCWCP). In the summer of 2005 the group received a grant of $32,804 from the Montana Noxious Weed Trust Fund, and plans are now being made to allocate this money and pool projects so participants will be able to negotiate the best rates possible from suppliers and other contractors. At this time it is unclear whether or not the Park will receive any funding from this grant for use towards weed control within the Park, but Park managers have decided it is in the Park's best interest to join in this effort regardless of the eventual disbursement of grant funds. By cooperating in this project, Park managers would be able to take advantage of much-reduced costs for chemicals and contractor time than if acting alone, they would be able to share in the technical expertise that has been gathered for this effort, and they would be acting as good neighbors to the private landowners adjacent to the Park.

Prior to its involvement in the LJCWCP, however, FWP is required to complete an EA which addresses the possible impacts that an aerial weed control program would cause. Region 3 first drafted a comprehensive region-wide noxious weed management plan in 1993 in order to outline efforts made to reduce the impacts of noxious weeds, protect resources, and fulfill legal mandates. The plan outlines an Integrated Weed Management (IWM) approach that includes management goals,

strategies, and control techniques, based on and consistent with federal, state and local weed management regulations, policies, and goals. Management goals include:

1) Prevent invasions of new noxious weeds: eliminate, reduce, or contain current infestations
2) Comply with noxious weed control laws
3) Manage noxious weed infestations without significant adverse environmental impacts
4) Minimize impacts on other land from weed infestations on FWP land
5) Cooperate with private and public land managers with weed control activities

An Environmental Assessment was written that addressed the Region 3 Weed Management Plan and evaluated possible impacts from weed-management activities mandated by the plan including cultural, mechanical, biological, and chemical control (the plan was updated in 2001, but the original EA was deemed sufficient to cover both plans). However, the EA did not evaluate and sanction aerial herbicide spraying specifically, so a separate supplemental EA addressing the proposed project is necessary prior to implementation.

If the park does not receive any grant money, money from the park's weed control budget would be used. For best results, the spraying would be repeated several times over the next several years, so it is estimated that approximately $3,000/yr would be allocated to this program. It is hoped and expected that weeds will be reduced sufficiently in 3-4 years that the spraying program would be significantly reduced, but it is probable that some aerial spraying will be required most years and will be used by Park managers as a weed control tool as needed.

Park managers propose conducting the aerial spraying program to control hounds-tongue, spotted knapweed, and other noxious weeds within the Park for reasons stated earlier, and also for reasons found in the mission statement and ten-year vision plan for the Park. The mission statement for Lewis and Clark Caverns State Park reads: *Lewis and Clark Caverns State Park provides for the preservation and protection of the underground caverns environment and above ground ecosystem…*

And the current ten-year vision statement includes the following section:
The Park will continue to promote a positive, cooperative, and open dialogue with adjacent landowners and local businesses on such issues as tourism, weed control, hunting, game damage, and illegal trespass. The plant ecosystem in the Park will be sustainable, with minimal impact by exotic noxious weeds.

The above-ground native ecosystem of the Park is currently not sustainable because of the prevalence of noxious weeds. If aggressive steps are not taken to control these exotic plant species, the native ecosystem of the Park will eventually be altered into a damaged landscape that is dominated by non-native plant species. As a significant landholder in the lower Jefferson River Valley, FWP has a responsibility to area neighbors to manage the land within the Park in such a way that neighboring lands are not negatively affected. If FWP does not control noxious weeds within the Park, those

weeds will serve as a weed bank, re-seeding previously treated areas in perpetuity. To be truly effective, a successful noxious weed control program must have the cooperation of all the landholders in an area.

In order to comply with their stated mission statement, Lewis and Clark Caverns State Park managers propose conducting (helicopter) herbicide spraying on approximately 100 acres encompassing multiple noxious weed infestations in undeveloped sections of the Park. As stated previously, Park managers have desired to do such a project for some time, but the costs of aerial spraying have been prohibitive. An aerial spraying program is necessary because most of the areas with severe infestations are on steep hillsides or are otherwise inaccessible (see Figures 7 and 8). There are no roads to these areas, and few trails. It is possible to access some of the areas with backpack sprayers, but the costs in staff man-hours would be excessive and inefficient. Some areas would be unsafe for personnel to access, especially with a backpack full of herbicide mix, which would weigh in excess of 40 pounds. Following aerial herbicide application Park staff would continue to control patches of noxious weeds in reasonably accessible areas by mechanical means or with backpack sprayers as part of their present weed management plan.

Figures 7 and 8. Steep, inaccessible areas of Lewis and Clark Caverns State Park would be typical candidates for aerial herbicide application.

FWP plans on hiring Heli-works Flight Services to do the spraying. This company has all necessary licenses, an excellent safety record, and much experience in aerial herbicide spraying. If this company is not available in future years, FWP would look for a similar applicator with necessary licenses, required safety record, emergency spill plan, and proven experience in aerial herbicide spraying. All herbicide application would be made by licensed applicators or by people under the direct supervision of licensed individuals (operators). All herbicides used by FWP and contractors are approved for use by the Montana Department of Agriculture and the EPA. Herbicide labels are an important component of herbicide use and safety, and are legal documents. All commercial herbicide applicators or applicators of restricted use herbicides must be certified by the state and commercial applicators must keep records to be submitted to the state on a five year basis (ARM 1997). Applicator licensing, training, and record keeping administered by the state are in turn supervised by the EPA.

The types of herbicide used and application rates and timing will be determined with assistance by Jefferson County Weed District and Extension Service staff, and will depend on the weed species, soil types, and proximity of water resources. Chemicals that may be used are: Cimarron, Cimarron Xtra, 2-4D ester, Tordon 22K, and Milestone. The expected rates of application for hounds-tongue are ½ oz/acre of Cimarron Xtra plus 1 pint/acre of 2-4D ester, or alternately, 1 ½ -2 pints/acre of Tordon 22K. The expected rate of application for knapweed is 1 pint/acre of Tordon 22K.

Figure 9. Partial List of Herbicides Commonly Used on Region 3 Properties.

Common Name	Trade Name	Type	Persistence[1]
Picloram	Tordon	Selective	H
Dicamba	Banvel	Selective	L
2,4-D	several	Selective	L
Clopyralid	Transline	Selective	M
Clopyralid + 2,4-D	Curtail	Selective	M
Metsulfuron	Escort/Cimarron	Selective	H
Glyphosate	Roundup/Rodeo	Non-selective	M

[1] Persistence refers to the longevity of a chemical's integrity, often measured as the time it takes for half of the original amount of active ingredients of a pesticide (by weight) to be degraded. H = High (half-life > 100 days); M = Medium (half-life > 30 < 100 days; L = Low (half-life $\leq$ 30 days)

Figures 3 and 10 show the approximate proposed treatment areas during the initial round of spraying. Area 1 is comprised almost entirely of soil unit 774F, which is comprised of rock outcrop and whitlash soil series. The whitlash series is characterized by 35-70% slopes and shallow, cobbly loam. Area 2 is also mainly comprised of soil unit 774F, but also might include small portions of 77F and 263 F. Soil unit 77F is comprised of non-soil rock material and pensore and crago soil series. These soils are also well-drained, cobbly or gravelly loams. Area 3 is also mainly comprised of soil unit 774F, and area 4 is comprised of approximately 40% soil unit 77F (Rock outcrop-Pensore, stony-Crago, stony, association, 25 to 60 percent slopes), 20% soil unit 632E (Rencot, very stony-Lahood, stony-Rock outcrop complex, 25 to 45 percent slopes), 20% soil unit 123F (Maiden, very stony-Rock outcrop-Lap, very stony, complex, 35 to 60 percent slopes), and 20% soil unit 773F (Rock outcrop-Pensore association, 15 to 60 percent slopes). Possible limitations and hazards for all soil types in the proposed spray area include soil blowing, water erosion, and potential for ground water contamination. Applicators would limit potential impacts by following label recommendations, controlling drift and droplet size, and by accurate placement of chemicals. To assure the correct coverage location, Heli-works uses the Trimble Ag-GPS.

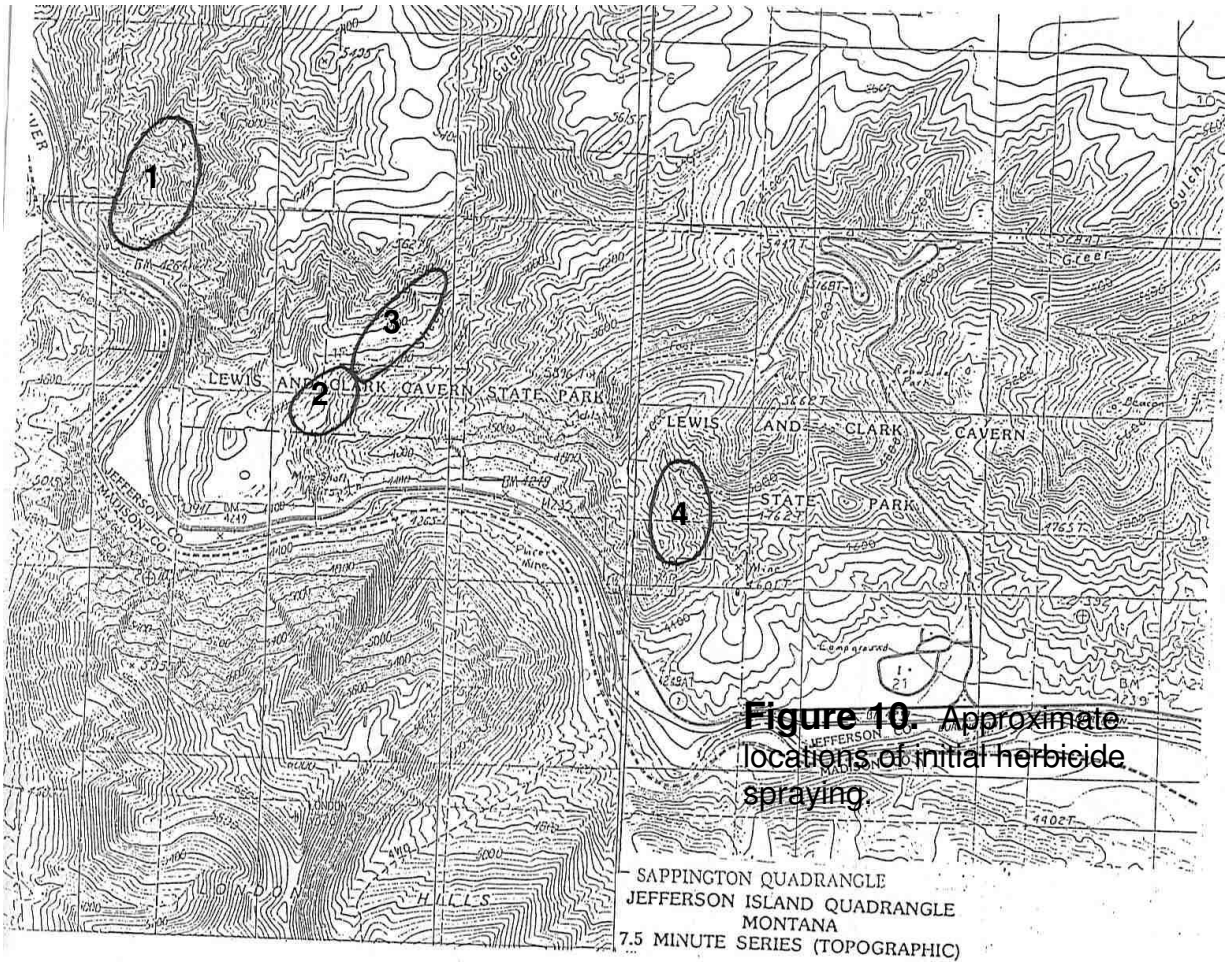


Figure 10. Approximate locations of initial herbicide spraying.

Park managers are aware of concerns regarding the application of herbicide via aerial spraying within the Park, and attempt to minimize reliance on chemical methods whenever possible. However, FWP also must meet its legal and ethical responsibility to manage and control noxious weeds on Department properties, and managers believe that an aerial herbicide spraying program would be the most practical, cost-effective, and ultimately safest method for addressing the serious noxious weed infestation within the Park. Any negative impacts caused by the spraying would be outweighed by the benefits, especially that of protecting native plant ecosystems in the Park and greater area.

PART II. ENVIRONMENTAL REVIEW

1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Alternative A: No Action

If no action is taken, noxious weeds will continue to invade Lewis and Clark Caverns State Park and spread onto adjacent lands. Park staff will continue to have difficulty

reaching these inaccessible areas as part of the Park's regular weed control program, and these untreated areas will serve as a weed bank in the future, spreading seeds to weed-free areas inside and outside the Park. If no action is taken, the Park will have lost an opportunity to work with area landowners in a cooperative effort to significantly reduce noxious weeds in the area. The native plant community will gradually be eliminated and replaced with less desirable non-native species.

Alternative B: Proposed Action
Note: a detailed evaluation of the Proposed Action is included in Part VI.

In the preferred Alternative, Park managers would initiate an aerial weed control program to target infestations of noxious weeds on steep hillsides and other inaccessible areas of the Park. By pooling their efforts with other area landowners, managers would be able to negotiate affordable rates from suppliers and contractors. Aerial weed spraying has been too expensive for the park to consider in the past, and likely would be in the future, in the absence of other buyers in the area.

2. **Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:**

There are no formal stipulations of mitigation or other controls associated with the proposed action. This action does not involve any permits or granting of a license on which stipulations would be placed.

PART III. PUBLIC PARTICIPATION

1. **Describe the level of public involvement for this project if any, and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?**
The public will be notified by way one statewide press release, and legal notices in the *Helena Independent Record, the Montana Standard, the Bozeman Chronicle,* and by public notice on the Fish, Wildlife & Parks web page: **http://fwp.mt.gov/publicnotices**. Individual notices will be sent to the region's standard EA distribution list and to those that have requested one.

Duration of comment period:

A 30-day comment period is proposed. This level of public involvement is appropriate for this scale of project.

Comments should be sent to:
Lynnette Kemp
Park Manager
PO Box 489
Whitehall, MT 59759
kempcaverns@in-tch.com

PART IV. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

Based on an evaluation of the primary, secondary, and cumulative impacts to the physical and human environment under the Montana Environmental Protection Act (MEPA), this environmental review found no significant impacts from the proposed aerial weed spraying project. In determining the significance of the impacts, FWP assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur, growth-inducing or growth inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value affected, and precedent that would be set as a result of the proposed action that would commit FWP to future actions; and potential conflicts with local, federal, or state laws. Therefore, an EA is the appropriate level of review and an EIS is not required.

2. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Lynette Kemp
Park Manager
PO Box 489
Whitehall, MT 59759
(406)287-3541
kempcaverns@in-tch.com

Linnaea Schroeer-Smith
Independent Contractor
1027 9th Ave
Helena, MT 59601
(406)495-9620
mtflower3@bresnan.net

3. List of agencies consulted during preparation of the EA:

Montana Fish, Wildlife & Parks
- Parks Division
- Wildlife Division
- Fisheries Division
- Design & Construction Bureau
- Lands Division
- Legal Unit

Montana State Historic Preservation Office (SHPO)
Montana Department of Commerce – Tourism
Montana Natural Heritage Program – Natural Resources Information System (NRIS)
United States Department of Agriculture
- Natural Resources Conservation Service

PART V. ENVIRONMENTAL REVIEW CHECKLIST

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Soil instability or changes in geologic substructure?		X				1a.
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X		X	1b.
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (attach additional pages of narrative if needed):

1a. The proposed project would not disturb any soil.

1b. Some types of soils are susceptible to leaching of herbicide, which can lead to erosion. All herbicides will be applied according to the water and soil restrictions as published on the label. Herbicide application will occur only on soils compatible with label restrictions. On soils where there is a high probability of leaching, herbicides with a low leach potential (2, 4-D amine, glyphosate) will be used. All of the soils contained in the proposed treatment area are fairly shallow (10-20 inches) and can be susceptible to erosion. Applicators would mitigate potential impacts by following label restrictions.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. AIR Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X		yes	2a.
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)						
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

2a. The proposed aerial weed spraying project would affect local air quality on a temporary basis. No spraying would be done in developed areas, and all hiking trails that traverse treatment areas would be closed during and after spraying until volatility has ended. The negative affects of aerial herbicide spraying can be mitigated by following label application guidelines concerning air temperature and wind speed, and by using spray additives and bonding agents when indicated. These measures help manage spray drift and volatility and limit the deterioration of ambient air quality.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

3. WATER Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			3a.
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				3f.
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?			X			3h.
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ****For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.)						
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)						
n. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (attach additional pages of narrative if needed):

3a. There is no permanent surface water within Lewis and Clark Caverns State Park. Several intermittent streams exist in the Park, but only one, Sheep Gulch, falls within the projected treatment area. Applicators would only use aquatic-approved herbicides in that area. All precautions will be taken to avoid drift of herbicide onto the surface of the Jefferson River. It is the applicators responsibility to control unwanted drift, and Heli-works will do so by factoring in wind, temperature and humidity levels before application. Another effective method of reducing drift is by applying large droplets (>150-200 microns). Heli-works uses high-flow rate nozzles with narrow spray angles that produce larger droplets. However, there is still a risk that a small amount of chemical could reach the river.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

3h. There are no wells in the projected treatment area, but there is a minor risk of groundwater contamination from the spraying of herbicide on the soils in the treatment areas. The risk of causing this impact can be reduced by strictly following label recommendations. Only aquatic-rated herbicides will be applied near intermittent streams. Please also see Comment 3a.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

4. VEGETATION Will the proposed action result in?	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?				X positive		4a.
b. Alteration of a plant community?				X positive		4b.
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				4c.
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?				X negative		4e.
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?						
g. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):4a.

4a. The proposed project would have a positive effect on the diversity, productivity, and abundance of native plant species in the area. Aerial herbicide application will significantly reduce the number of noxious weeds in the project area, encouraging re-growth of native forbs and graminoids. Potential impacts to non-target species would be limited by following label recommendations, controlling drift (see Comment 3a), and by accurate placement of chemicals. To assure the correct coverage location, Heli-works uses the Trimble Ag-GPS.

4b. Please see comment 4a.

4c. There are no documented occurrences of any unique, threatened, endangered, or sensitive plant species within Lewis and Clark Caverns State Park. However, a rare plant association of curl-leaf mountain mahogany - bluebunch wheatgrass (*Cercocarpus ledifolius - Agropyron spicatum*) does occur in several sections of the park. This undisturbed vegetation association is a potential ecological natural landmark within the northern Rockies. This plant association would not be affected because the spraying would not occur in areas where these associations are found, and also, the herbicides used do not target/affect these types of vegetation.

4e. The proposed project would have a potentially significant negative impact on the abundance of noxious weeds in treatment areas and the larger area. The proposed project would not only cause a significant decline in noxious weeds immediately after spraying, but would also prevent the current infestation from spreading farther within the Park and larger area.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?		X				5a.
b. Changes in the diversity or abundance of game animals or bird species?			X positive			5b.
c. Changes in the diversity or abundance of nongame species?			X positive			5c.
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			5g.
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)						
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)						
j. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish and Wildlife (attach additional pages of narrative if needed):

5a. Noxious weeds are defined as such because generally they 1) are non-native species and have been introduced from a different environment 2) out-compete native vegetation 3) spread rapidly 4) are of little or no forage value (or poisonous) and 5) are not a functioning part of the ecosystem they inhabit. Herbicide applications to control noxious weeds will increase forage availability for wildlife species. An increase in food sources in treatment areas will have a small but positive effect on the diversity and abundance of game and non-game animal species in the Park and larger area. Applicators will follow label recommendations, using only aquatic-approved varieties near water resources. The spray systems used by Heli-works are fully calibrated to ensure that the flow control valve dispenses the proper amount of gallons per acre.

5b. Please see comment 5a.

5c. Please see comment 5a.

5g. Exposure of wildlife to herbicide applied at standard treatment rates does not normally pose a significant health risk to animals.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

5f. A search of the Montana Natural Heritage Database did not reveal any documented occurrences of threatened or endangered species of wildlife in the proposed project area. Four wildlife species of concern were identified, but would not be affected by the proposed project, because herbicides applied at operational rates pose little to no health threat to most animals. Please see Appendix 2 for a more complete discussion of species of concern within the project area.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS **Will the proposed action result in:**	**IMPACT ***				**Can Impact Be Mitigated ***	**Comment Index**
	Unknown *	**None**	**Minor ***	**Potentially Significant**		
a. Increases in existing noise levels?			X			6a.
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

6a. There would be a some noise generated by the helicopters used in the proposed aerial spraying program, but the duration would be short and it is unlikely that visitors would be affected because all treatment areas are in remote areas of the Park. Affected hiking trails will be closed during aerial application of herbicide.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

7. LAND USE Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			X positive			7a.
b. Conflict with a designated natural area or area of unusual scientific or educational importance?			X positive			7b.
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

7a. The reduction of noxious weeds would increase the productivity of the Cooperative Weed Control Project area.

7b. Lewis and Clark Caverns State Park was established to provide for the preservation and protection of the underground caverns and above ground ecosystem. Effective control of noxious weeds is a requisite aspect of protecting the above ground ecosystem of the Park.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

8. RISK/HEALTH HAZARDS Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		yes	8a.
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X		yes	8c.
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)			X		yes	8a.
e. Other:			X			8e.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

8a. The proposed action involves a small risk of unintentional herbicide spillage. This possibility will be minimized by ensuring that all herbicide applications will be made by licensed applicators or by people under the direct supervision of licensed individuals. Heli-works Flight Services (based in Deer Lodge, MT) has been identified as being the likely contractor for the proposed program. This company has extensive experience in aerial herbicide spraying and has developed a protocol to prevent chemical spills. The company also has an Emergency Spill Plan in place in case a spill does occur. If this Heli-works is not available in future years, FWP would look for a similar applicator with necessary licenses, required safety record, emergency spill plan and proven experience in aerial herbicide spraying.

Also, addressing the weed problem now would ultimately reduce the need for greater use of herbicide later when weed populations have expanded.

8c. The long-term effects of chemical herbicides continue to be researched. Short-term health effects can be serious for sensitive individuals. Negative health effects following exposure to herbicides are most commonly reported among herbicide applicators. All herbicides used by FWP and contractors are approved for use by the Montana Department of Agriculture and the EPA. Potential impacts to human health would be mitigated by closing all treatment areas during spraying and keeping them closed until the persistence of the herbicide used in that area has diminished sufficiently (see Figure 9), controlling drift, and by posting signs advising visitors of the possible risks, especially for those individuals who have an extreme sensitivity to chemical exposure.

8e. There would be a low risk of injury or death to the helicopter pilot and anyone else in the helicopter that would be used in the aerial spraying

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

9. COMMUNITY IMPACT Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:			X positive			9f.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

9f. The proposed project would have a positive affect on the surrounding community by reducing the number of noxious weeds in the area. Adjacent landowners are currently involved in a coordinated weed-control effort, and to be effective, a successful noxious weed control program must have the cooperation of all the landholders in an area.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

10. PUBLIC SERVICES/TAXES/UTILITIES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				10a.
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?			X			10d.
e. **Define projected revenue sources						10e.
f. **Define projected maintenance costs.						10f.
g. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

10a. The proposed action would not have an effect upon or result in a need for new or altered governmental services.

10d. Aerial weed spraying necessitates the use of fossil fuels for the duration of the project.

10e. The cost of the project is estimated at $3,000/yr from the park's weed control budget. There is a possibility that the Park will receive funds through the Montana Noxious Weed Trust Fund and the Cooperative Weed Control Project.

10f. There would be no future additional maintenance costs necessitated by this project.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

** 11. AESTHETICS/RECREATION Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X positive			11a.
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)			X			11c.
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.)						
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

11a. The aerial spraying activity and the effect of herbicide application will not be aesthetically pleasing in the short-term, but will ultimately help ensure the long-term aesthetic values of these Park and vistas through increased native plant diversity and density.

11c. See tourism report in Attachment A.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				12a.
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)						
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

12a. The proposed project would not result in the destruction or alteration of any site, structure, or object of prehistoric, historic, or paleontological importance. SHPO clearance is not required because the proposed project would not result in any ground disturbance.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				13a.
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?			X			13b.
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)						
g. ****For P-R/D-J, list any federal or state permits required.						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

13a. This EA found no significant impacts to the human or physical environment from the proposed action.

13b. There is a standard level of risk to the helicopter pilot.

PART VI. NARRATIVE EVALUATION AND COMMENT

This EA did not reveal any significant negative impacts to the physical and human environment stemming from the proposed action. No threatened or endangered species would be affected, and no unique or physical features would be disturbed. Some non-target plant species would likely be negatively affected by the spraying in the immediate treatment area, but the overall health of native plants, and therefore the entire ecosystem in the Park, would be improved in the long-term.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

APPENDIX 1
HB495
PROJECT QUALIFICATION CHECKLIST

Date July 11, 2006 **Person Reviewing** Linnaea Schroeer-Smith

Project Location: Lewis and Clark Caverns State Park, Jefferson County

Description of Proposed Work: Montana Fish, Wildlife & Parks proposes initiating an aerial weed control program in the Park to reduce and contain several noxious weed infestations.

The following checklist is intended to be a guide for determining whether a proposed development or improvement is of enough significance to fall under HB 495 rules. (Please check _ all that apply and comment as necessary.)

[ ] A. New roadway or trail built over undisturbed land?
Comments: None

[ ] B. New building construction (buildings <100 sf and vault latrines exempt)?
Comments: None

[ ] C. Any excavation of 20 c.y. or greater?
Comments: None

[ ] D. New parking lots built over undisturbed land or expansion of existing lot that increases parking capacity by 25% or more?
Comments: None

[ ] E. Any new shoreline alteration that exceeds a double wide boat ramp or handicapped fishing station?
Comments: None.

[ ] F. Any new construction into lakes, reservoirs, or streams?
Comments:

[ ] G. Any new construction in an area with National Registry quality cultural artifacts (as determined by State Historical Preservation Office)?
Comments: None

[ ] H. Any new above ground utility lines?
Comments: None

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[ ] I. **Any increase or decrease in campsites of 25% or more of an existing number of campsites?**
Comments: None.

[ ] J. **Proposed project significantly changes the existing features or use pattern; including effects of a series of individual projects?**
Comments: None

If any of the above are checked, HB 495 rules apply to this proposed work and should be documented on the MEPA/HB495 CHECKLIST. Refer to MEPA/HB495 Cross Reference Summary for further assistance.

APPENDIX 2

Sensitive Plants and Animals in the Lewis and Clark Caverns State Park area.

A search of the Montana Natural Heritage Program (MNHP) element occurrence database (nhp.nris.state.mt.us/eoportal) indicates no known occurrences of federally listed threatened, endangered, or proposed threatened or endangered plant or animal species in the proposed project site.

Species of Concern Terms and Definitions

Montana Species of Concern. The term **"Species of Concern"** includes taxa that are at-risk or potentially at-risk due to rarity, restricted distribution, habitat loss, and/or other factors. The term also encompasses species that have a special designation by organizations or land management agencies in Montana, including: Bureau of Land Management Special Status and Watch species; U.S. Forest Service Sensitive and Watch species; U.S. Fish and Wildlife Service Threatened, Endangered and Candidate species.

Status Ranks (Global and State)

The international network of Natural Heritage Programs employs a standardized ranking system to denote global (**G** -- range-wide) and state status (**S**) (NatureServe 2003). Species are assigned numeric ranks ranging from 1 (critically imperiled) to 5 (demonstrably secure), reflecting the relative degree to which they are "at-risk". Rank definitions are given below. A number of factors are considered in assigning ranks -- the number, size and distribution of known "occurrences" or populations, population trends (if known), habitat sensitivity, and threat. Factors in a species' life history that make it especially vulnerable are also considered (e.g., dependence on a specific pollinator).

Status Ranks

Code	Definition
G1 S1	At high risk because of extremely limited and/or rapidly declining numbers, range, and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2 S2	At risk because of very limited and/or declining numbers, range, and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3 S3	Potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas.
G4 S4	Uncommon but not rare (although it may be rare in parts of its range), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern.
G5 S5	Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.

1. *Oncopodura cruciata* (springtail)

State: **S1S2** U.S. Fish and Wildlife Service:
Global: **G1G2** U.S. Forest Service:
U.S. Bureau of Land Management:

It is unlikely that the proposed project would affect this invertebrate animal.

2. *Great Blue Heron Rookery*

Natural Heritage Ranks: Federal Agency Status:
State: **SNR** U.S. Fish and Wildlife Service:
Global: **GNR** U.S. Forest Service:
U.S. Bureau of Land Management:

This heron rookery of about 40 nests is not located within Lewis and Clark Caverns State Park or the projected weed treatment area.

3. *Corynorhinus townsendii* (Townsend's Big-Eared Bat).

Natural Heritage Ranks: Federal Agency Status:
State: **S2** U.S. Fish and Wildlife Service:
Global: **G4** U.S. Forest Service: **Sensitive**
U.S. Bureau of Land Management: **Sensitive**

It is unlikely that the proposed project would affect this species.

4. *Cryptobunus cavicolus* (Cave Obligate Harvestman).

Natural Heritage Ranks: Federal Agency Status:
State: **S1S2** U.S. Fish and Wildlife Service:
Global: **G1G2** U.S. Forest Service:
U.S. Bureau of Land Management:

It is unlikely that the proposed project would affect this cave-dwelling invertebrate.

5. *Myotis thysanodes* (Fringed Myotis).

Natural Heritage Ranks: Federal Agency Status:
State: **S3** U.S. Fish and Wildlife Service:
Global: **G4G5** U.S. Forest Service:
U.S. Bureau of Land Management: **Sensitive**

It is unlikely that the proposed project would affect this species.

Interested parties may contact MFWP Region 2 offices for a detailed map of sensitive species Element Occurrences (EOs).

Information courtesy of Montana Natural Heritage Program.

ATTACHMENTS

A. Tourism Report – Department of Commerce

ATTACHMENT A
TOURISM REPORT
MONTANA ENVIRONMENTAL POLICY ACT (MEPA)/HB495

The Montana Department of Fish, Wildlife and Parks has initiated the review process as mandated by HB495 and the Montana Environmental Policy Act in its consideration of the project described below. As part of the review process, input and comments are being solicited. Please complete the project name and project description portions and submit this form to:

Victor Bjornberg, Tourism Development Coordinator
Travel Montana-Department of Commerce
PO Box 200533
1424 9th Ave.
Helena, MT 59620-0533

Project Name: Lewis and Clark Caverns State Park Aerial Weed Spraying Project

Project Location: Lewis and Clark Caverns State Park

Project Description: Montana Fish, Wildlife & Parks proposes initiating an aerial weed spraying program at Lewis and Clark County State Parks to reduce and contain several noxious weed infestations, particularly spotted knapweed and hounds-tongue. All treatment areas would be in the undeveloped areas of the Park that are largely inaccessible by visitors. Treated areas would likely be unaesthetic for several months, but over several years would become more aesthetic than before treatment due to re-growth and increased vigor of native vegetation.

1. Would this site development project have an impact on the tourism economy?
   NO **YES** If YES, briefly describe:

The aerial spraying program could have short-term negative impacts on visitation to this state park. Although the spraying would be done in areas "largely inaccessible by visitors" wind can carry spray and some visitors might not feel safe being in an area where this activity is taking place. In the long term, the negative impacts would be minimal.

2. Does this impending improvement alter the quality or quantity of recreation/tourism opportunities and settings?
   NO YES If YES, briefly describe:

Signature Victor Bjornberg, Tourism Development Coordinator, MT Commerce Dept
Date August 3, 2006

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